



# Compartment Review Presentation

## Sault Ste. Marie Forest Management Unit

Compartment 45174

Entry Year 2017

Acreage: 1,810

County Mackinac

Management Area: Lake Michigan Shoreline

**Revision Date:** 2015-08-07

**Stand Examiner:** Matt Edison

### Legal Description:

T43N-R10W Sections 27, 28, 33 & 34, Garfield Township.

### Identified Planning Goals:

The compartment location is the southeast corner of US-2 and M-117, south and east to Lake Michigan. The large cedar swamps, and wooded dune and swale complexes host wintering deer, and are to be left intact. This will also protect any endemic shoreline threatened and endangered species and communities. There has been timber management in accessible stands during the past entries. There are no treatments prescribed this entry.

### Soil and topography:

The majority of the compartment consists of wooded dune and swale complexes. Lowlands primarily consist of Markey and Carbondale mucks, which occupy depressions on ground moraines, lake plains and outwash plains. Minor components of Eastport-Leafriver complex (dune-swale complexes), Markey-Spot-Finch complex (organic depressions; depressions and nearly level areas on lake plains), and Zela muck (swales and depressions on beach ridges) are present. The swale and ridge complex along Lake Michigan is primarily Leafriver-Croswell-Wainola complex. Other associated upland areas consist of Croswell-Wainola complex (nearly level and undulating areas on lake plains), and Eastport sand (nearly level to rolling to very steep areas on dune and beach ridges). The unusual outlier in this compartment is in the SENE of section 28. This corner consists of Amadon-Rock outcrop complex and occupies nearly level to rolling areas on bedrock controlled ground moraines.

### Ownership Patterns, Development, and Land Use in and Around the Compartment:

State lands are adjacent to the west and southwest. These are winter deer yarding areas. Ownership to the north is primarily state lands, including MDOT, and one private forty. This is also considered winter deer yarding areas. Highway US-2 runs along the north edge of the compartment. Two MDOT parcels of 40 acres each abut US-2 to the south. Two private in-holdings (seasonal camps) of 80 acres each also abut US-2 to the south. The adjacent lands to the east are part of the Hiawatha Sportsman's Club. The Hiawatha Club lands are not developed here, except for along the Lake Michigan shoreline to the east where houses are located. There is also a private access road along the eastern boundary of the compartment (Carnegie Trail), which leads to Lake Michigan. The road follows the shoreline to the southwest where high value, deed restricted homes dot the shoreline. This private area along the southern boundary of the compartment is part of the Carnegie Trail Association, with multiple landowners as well as some Nature Conservancy parcels. One of these parcels was recently gifted to the state as part of a wetland mitigation plan.

### Unique Natural Features:

There is a known osprey nest within the compartment. With the lakeshore influences, there is potential for several rare, threatened and endangered plant and animal species and communities.

### Archeological, Historical, and Cultural Features:

None noted.

### Special Management Designations or Considerations:

None

### Watershed and Fisheries Considerations:

Fisheries Values: Fair.

The Rock River hosts runs of steelhead, suckers, and smelt and brook trout can be found below Mud Lake. MDEQ rated habitat as good as according to the GLEAS procedure 51 quantitative biological survey.

### Wildlife Habitat Considerations:

Compartment 174 is part of the Lake Michigan Shoreline Management Area, where piping plover and white-tailed deer are featured species. The entire compartment is part of a deer wintering complex. A wooded dune and swale ecological reference area is located here. Conifer dominates this compartment with a major component of cedar, fir, white pine, and

hemlock. No treatments are planned for this compartment, and the wooded dune and swale complex will remain protected. Retention of the mature conifer component will provide un-fragmented forest critical to migratory songbirds, winter cover for deer, and support many other species ranging from snowshoe hare to black bear and raptors.

### **Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of lacustrine sand and gravel, peat, and muck. The glacial drift thickness varies between 10 and 100 feet (typically < 50 feet). The Silurian Engadine Group subcrops below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. Gravel pits are located less than two miles to the northwest, but potential appears to be limited in the compartment. There is no current economic oil and gas production in the UP.

### **Vehicle Access:**

Highway US-2 runs along the northern boundary of the compartment, however, overall access is fair to poor. Rock River Road, a fair dirt/gravel DNR road, runs from Big Knob Road up to this old crossing at Rock River. Carnegie Trail, a private gravel road, is located immediately adjacent on the eastern boundary of the compartment. The road was built in 1979 and is a relatively straight shot south towards Lake Michigan, crossing several ridges and swales along the way.

### **Survey Needs:**

None Needed

### **Recreational Facilities and Opportunities:**

No permanent recreational facilities are located within the compartment. There is evidence of hunting/fishing camps at the old Rock River crossing. Abundant opportunities exist for hunting, trapping and fishing numerous wildlife/fish species. Blueberry, cranberry and mushroom picking is available for those willing to go out of the way. Big Knob campground is located to the southwest of the compartment via Big Knob road. Adjacent to the campground and this compartment are several nature trails.

### **Fire Protection:**

The potential for wildfires exists throughout the upland ridge areas. These areas are mixed stands by nature, but contain moderate to high components of conifer species. Lightning strikes would be the primary source of ignition. Other possibilities include human activities (adjacent homes, camps, and dispersed camping), motorist activities (along US-2, Carnegie Trail, and Rock River Road), and downed power lines. Where fires may occur in the lowlands, mop up may become extensive. Access to fires may be problematic.

### **Additional Compartment Information:**

A Forest Treatment Proposal (FTP) has been approved to treat invasive phragmites along the Lake Michigan shoreline. Treatments as per work instructions and FTP may occur along the shoreline as necessary to eliminate the colonizing invasive phragmites.

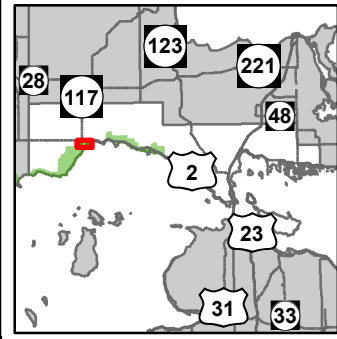
### **The following reports from the Inventory are attached:**

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

### **The following information is displayed, where pertinent, on the attached compartment maps:**

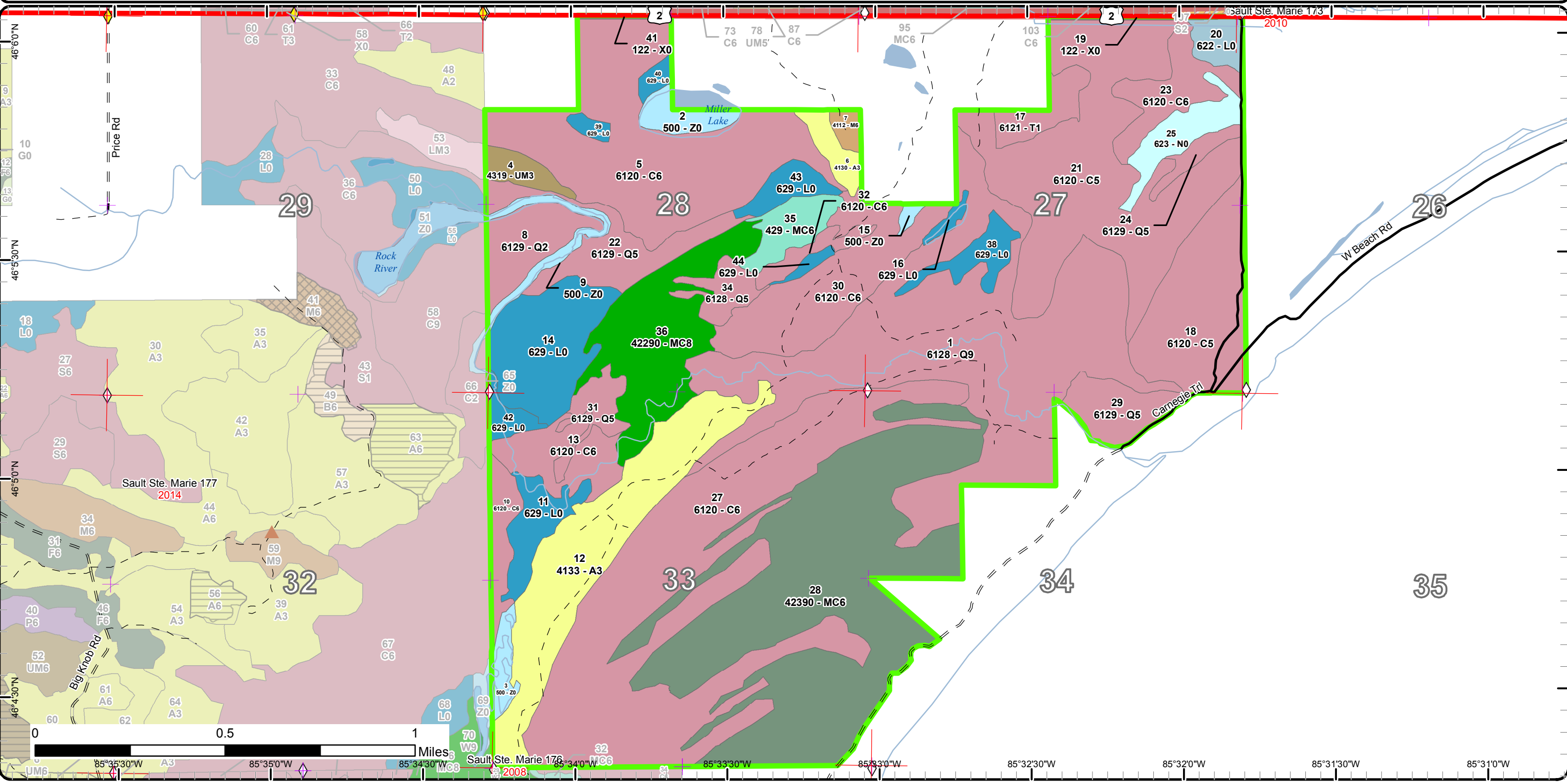
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments

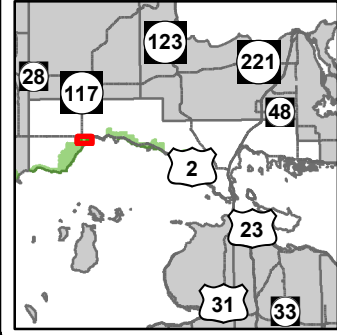


Compartment: 174  
 T43N, R10W, Sec: 27, 28, 33, 34  
 County: Mackinac  
 Unit: Sault Ste. Marie  
 Mgmt Area: Lake Michigan Shoreline  
 YOE: 2017  
 Acres: 1810 GIS Calculated  
 Examiner: Matt Edison  
 Map Revised: 8/10/2015  
 Map Phase: Review

- ✚ Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- Highway
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- ▲ Berms
- Rivers
- Lakes
- 411 - Northern Hardwood
- 413 - Aspen
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Fores
- 612 - Lowland Coniferous Forest
- Non-Forest Covertype
- 122 - Roads/Parking Lot
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

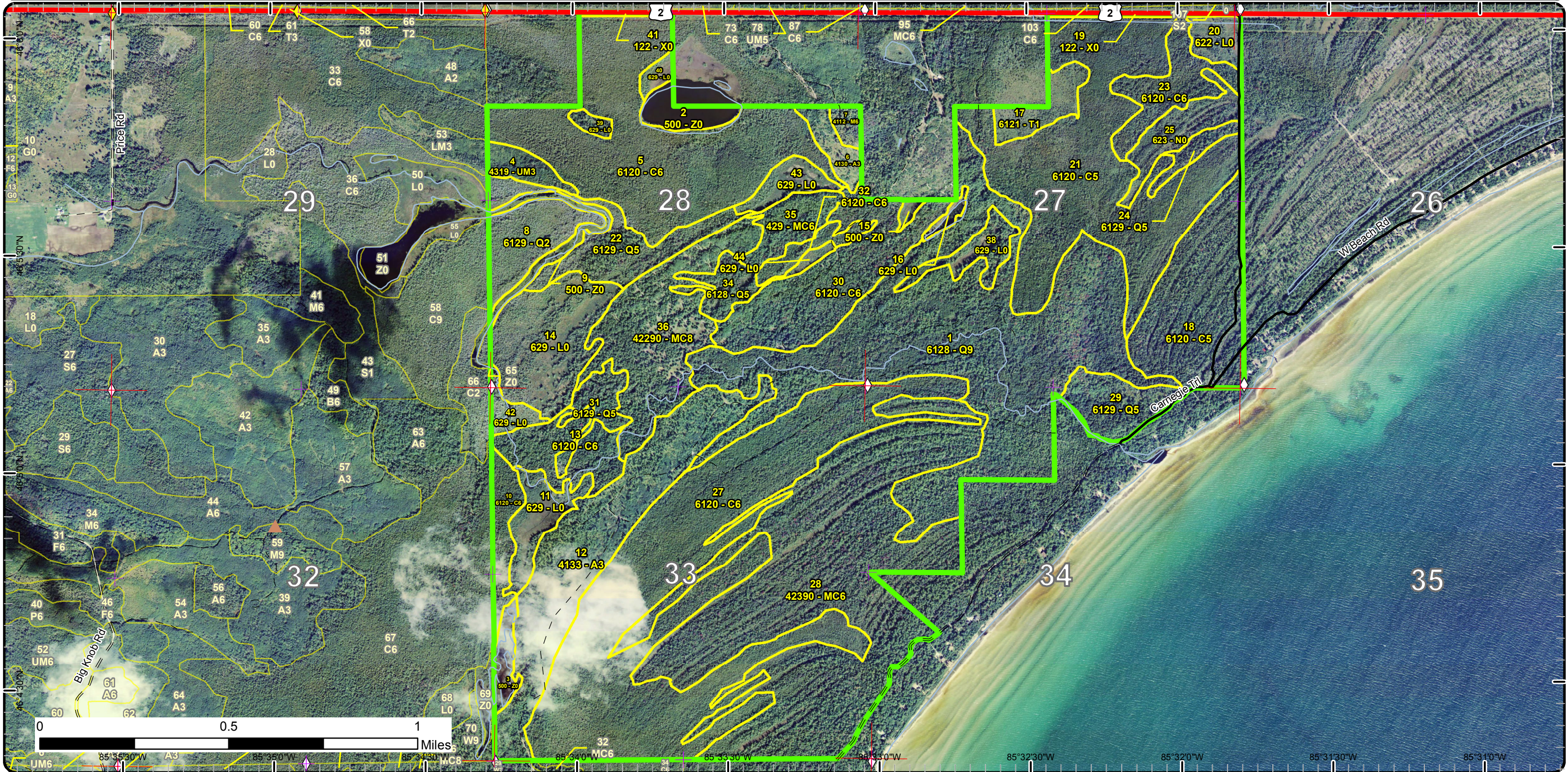


# Stand Boundary Map



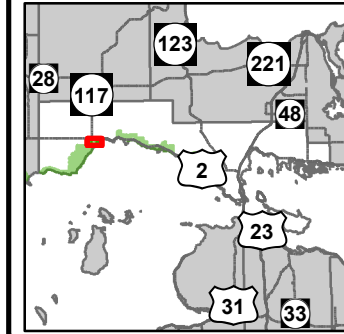
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- ✚ Remonumented Section Corners Forest Covertype
  - ◆ Survey Grade GPS Corners
  - ◇ Field Grade GPS Corners
  - Miris Corners
  - Highway
  - Paved Roads
  - Gravel Roads
  - Poor Dirt Roads
  - ▲ Berms
  - Rivers
  - ▭ Stand Boundaries
- |                                 |                                  |
|---------------------------------|----------------------------------|
| 411 - Northern Hardwood         | 623 - Emergent Wetland           |
| 413 - Aspen                     | 629 - Mixed non-forested wetland |
| 422 - Natural Pines             |                                  |
| 423 - Other Upland Conifers     |                                  |
| 429 - Mixed Upland Conifers     |                                  |
| 430 - Upland Mixed Fores        |                                  |
| 612 - Lowland Coniferous Forest |                                  |
- Non-Forest Covertype
- |                         |
|-------------------------|
| 122 - Roads/Parking Lot |
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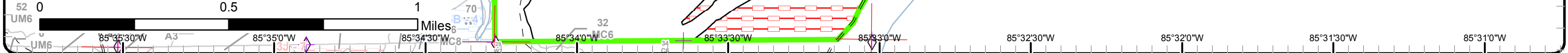
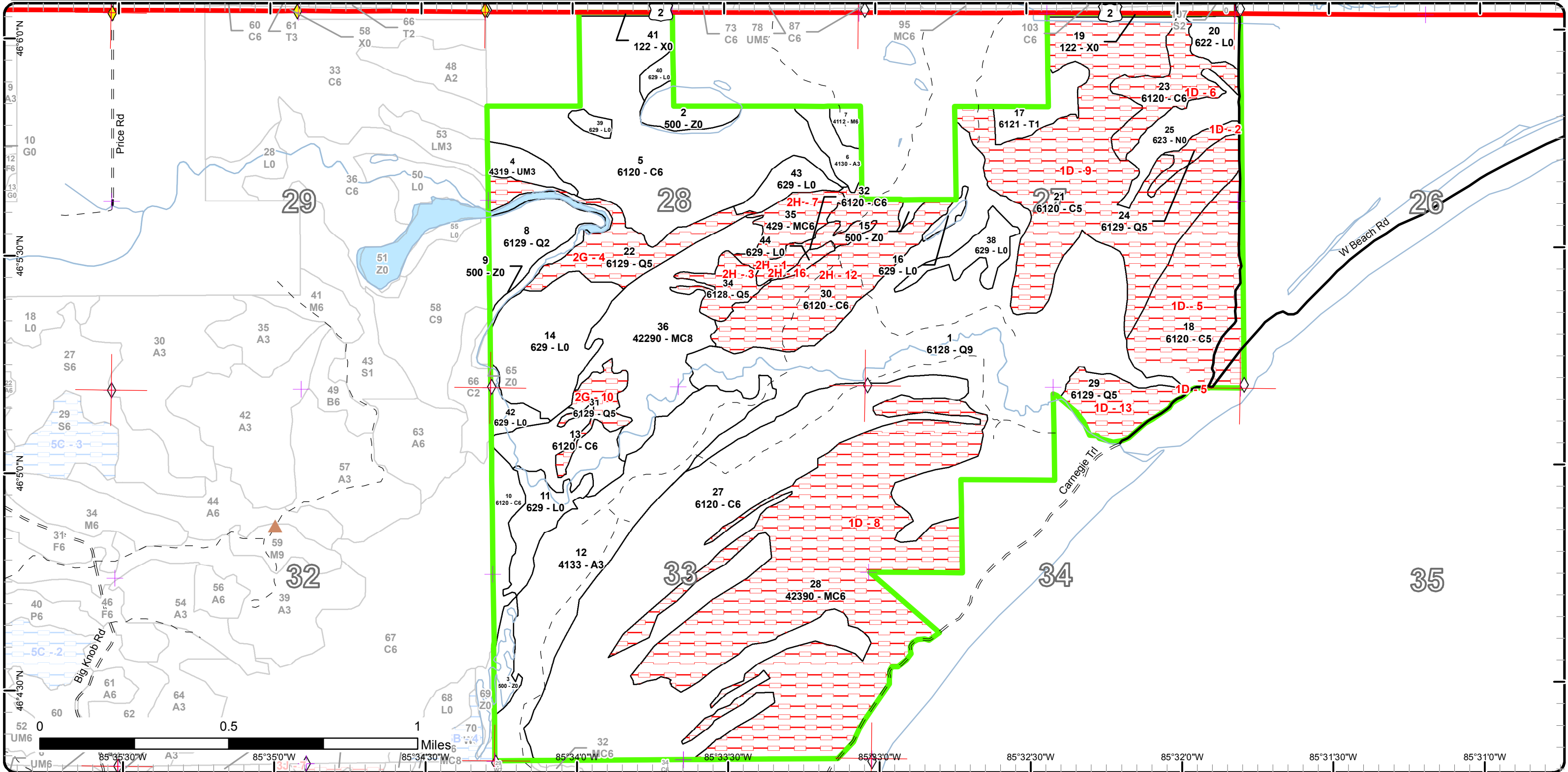


# Special Conservation Areas & Site Conditions Map

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- ✚ Remonumented Section Corners Site Condition
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- Highway
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- ▲ Berms
- Rivers
- Stand Boundaries
- Unavailable
- Unavailable Factors
  - 1D: Interest Group / Neighbor
  - 2G: Too wet (sensitive soils, does not include access issues)
  - 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	10	99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
Cedar	0	0	0	0	0	0	0	0	0	73	190	248	16	0	0	240	0	0	767
Lowland Conifers	0	0	0	0	0	0	50	36	0	20	0	0	0	0	0	0	0	263	369
Lowland Shrub	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129
Marsh	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	73
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Tamarack	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
Upland Conifers	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	257	275
Upland Mixed Forest	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Urban	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Water	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
<b>Total</b>	<b>186</b>	<b>10</b>	<b>99</b>	<b>0</b>	<b>10</b>	<b>15</b>	<b>50</b>	<b>36</b>	<b>0</b>	<b>111</b>	<b>190</b>	<b>248</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>240</b>	<b>0</b>	<b>598</b>	<b>1809</b>



## Report 2 – Treatment Summary

**Sault Ste. Marie Mgt. Unit**  
**Year of Entry: 2017**

**Compartment 174**  
**Total Compartment Acres: 1,810**

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### Acres of Harvest

Commercial Harvest - 0  
Harvests with Site Condition - 0  
Next Step Harvest - 0  
Habitat Cut - 0

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S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
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#Type!

**Habitat Cut:**

Prescription  
Specs:

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date:

**Site Condition:**

**Total Treatment  
Acreage Proposed: 0.0**



Dominant Site Conditions

	1D	2G	2H
Aspen			
Cedar	260		74
Lowland Conifers	30	49	13
Lowland Shrub			3
Marsh			
Natural Mixed Pines			
Northern Hardwood			
Tamarack			
Upland Conifers	257		18
Upland Mixed Forest			
Urban			
Water			
Total Forested Acres	548	49	108
Relative Percent			

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	9	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
2	Unavailable	1D: Interest Group / Neighbor	7	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Matt Edison : Examiner

Compartment: 174

Year of Entry: 2017

3	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	13	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	36	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	Unavailable	1D: Interest Group / Neighbor	69	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
6	Unavailable	1D: Interest Group / Neighbor	27	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
7	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
8	Unavailable	1D: Interest Group / Neighbor	257	3G: Other Influence zones - See comments	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Dune and swale area							

## Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Matt Edison : Examiner

Compartment: 174

Year of Entry: 2017

9	Unavailable	1D: Interest Group / Neighbor	164	1C: Other dept or div proc/practices	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
12	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	65	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
13	Unavailable	1D: Interest Group / Neighbor	23	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
16	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

Mgt. Unit

Compartment: #Type!

Year of Entry:



## Report 6 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments

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### Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

\* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

Conservation Area	Type	Description
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## Sault Ste. Marie Mgt. Unit

## Report 8 – Forested Stands

Compartment: 174

Year of Entry: 2017



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	250.4	90	81-110	Infinitely variable stand. Predominantly low ground with white pine on the island areas of upland scattered throughout. Smaller diameter spruce and tamarack in wettest areas. Not much to do here this entry
4	4319 - Mixed Upland Forest	Sapling Well	10.1	30	Immature	Part of larger stand in adjacent compartment. Regeneration looking ok.
5	6120 - Lowland Cedar	Poletimber Well	144.9	107	Unspecified	Wet cedar.
6	4130 - Aspen	Sapling Well	10.1	5	Immature	Stand was cut in 2011. Good looking aspen regeneration.
7	4112 - Maple, Beech, Cherry Association	Poletimber Well	4.8	65	81-110	Thinned last entry. Decent looking poles. Heavy deer browse.
8	6129 - Mixed Coniferous Lowland Forest	Sapling Medium	27.1	57	Unspecified	Data taken from previous inventory. No access.
10	6120 - Lowland Cedar	Poletimber Well	15.8	118	141-170	Small part of larger stand in adjacent compartment. Very wet in some places with sparse basal area. Mix of cedar, balsam, spruce, birch and some hardwoods. Not very merchantable.
12	4133 - Aspen, Mixed Pine	Sapling Well	98.8	15	51-80	Stand was cut in 2003. Cut all species except WP and RP. Aspen, birch, maple mix regenerating nicely.
13	6120 - Lowland Cedar	Poletimber Well	28.5	109	Unspecified	
17	6121 - Tamarack	Sapling Poor	15.0	45	51-80	
18	6120 - Lowland Cedar	Poletimber Medium	73.0	88	Unspecified	Very wet cedar and mix in lower wetlands in dune and swale area. Cedar and other species on small ridge portions.
21	6120 - Lowland Cedar	Poletimber Medium	163.5	90	Unspecified	Wetland cedar. Not much size.
22	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	35.9	60	Unspecified	
23	6120 - Lowland Cedar	Poletimber Well	27.4	90	Unspecified	Lowland cedar mix, sparse in places. Very wet ground.
24	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	7.1	80	Unspecified	Lowland conifer mix with some large white pine on upland knobs. Tag alder in open wet areas.
27	6120 - Lowland Cedar	Poletimber Well	240.0	145	Unspecified	Dense cedar stand in low wet ground just above ridge and swale complex. Tag alder in open wet areas. Some scattered spruce and balsam where there are small ridges.

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Sault Ste. Marie Mgt. Unit

## Report 8 – Forested Stands

Compartment: 174  
Year of Entry: 2017

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	42390 - Mixed Non-Pine Upland Conifers	Poletimber Well	257.2	98	111-140	Widely variable stand of sharp ridges and very wet lowland with tag alder. This is ridge and swale type stand. Not much viable opportunity from the limited access.
29	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	23.4	58	Unspecified	Wet stand with some small upland islands where the trees grow. Tag alder and water in remainder.
30	6120 - Lowland Cedar	Poletimber Well	65.4	107	Unspecified	Wet cedar.
31	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	13.1	85	Unspecified	Wetland with some conifer.
32	6120 - Lowland Cedar	Poletimber Well	8.9	100	Unspecified	Lowland cedar between ridges.
34	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	13.2	88	Unspecified	
35	429 - Mixed Upland Conifers	Poletimber Well	17.9	85	Unspecified	Stand is a very steep ridge between wetlands. There is virtually no access from adjacent stand as there is a sharp ravine and wetland blocking. Very unique landform for our area.
36	42290 - Natural Mixed Pine	Sawtimber Medium	72.7	94	51-80	Openland stand of mixed pine. Stand is on hilly ground and north of Rock River Road.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	500 - Water	11.6	No	
3	500 - Water	8.8	No	
9	500 - Water	10.3	No	
11	629 - Mixed non-forested wetland	19.5	No	
14	629 - Mixed non-forested wetland	53.5	No	
15	500 - Water	1.9	No	
16	629 - Mixed non-forested wetland	3.0	No	
19	122 - Road/Parking Lot	2.9	No	
20	622 - Lowland Shrub	10.3	No	
25	623 - Emergent Wetland	20.2	No	
38	629 - Mixed non-forested wetland	13.6	No	
39	629 - Mixed non-forested wetland	3.3	No	Flooded area of blowdown.
40	629 - Mixed non-forested wetland	4.0	No	
41	122 - Road/Parking Lot	1.4	No	
42	629 - Mixed non-forested wetland	7.3	No	
43	629 - Mixed non-forested wetland	11.8	No	
44	629 - Mixed non-forested wetland	2.8	No	